Sheng Xu

List of Publications by Year in Descending Order

91 papers	13,339 citations	49 h-index	104 g-index
104 ext. papers	15,415 ext. citations	15.6 avg, IF	6.4 L-index

#	Paper	IF	Citations
91	A self-sustainable wearable multi-modular E-textile bioenergy microgrid system. *Nature Communications*, **2021**, 12, 1542	17.4	56
90	Nanomaterial Biointerfacing via Mitochondrial Membrane Coating for Targeted Detoxification and Molecular Detection. *Nano Letters*, **2021**, 21, 2603-2609	11.5	17
89	Fabric-substrated capacitive biopotential sensors enhanced by dielectric nanoparticles. *Nano Research*, **2021**, 14, 3248-3252	10	3
88	Smart Contact Lenses for Biosensing Applications. *Advanced Intelligent Systems*, **2021**, 3, 2170047	6	
87	Smart Contact Lenses for Biosensing Applications. *Advanced Intelligent Systems*, **2021**, 3, 2000263	6	18
86	Single-crystal halide perovskites: Opportunities and challenges. *Matter*, **2021**, 4, 2266-2308	12.7	8
85	Instant, multiscale dry transfer printing by atomic diffusion control at heterogeneous interfaces. *Science Advances*, **2021**, 7,	14.3	4
84	A passive perspiration biofuel cell: High energy return on investment. *Joule*, **2021**, 5, 1888-1904	27.8	30
83	Continuous monitoring of deep-tissue haemodynamics with stretchable ultrasonic phased arrays. *Nature Biomedical Engineering*, **2021**, 5, 749-758	19	23
82	An epidermal patch for the simultaneous monitoring of haemodynamic and metabolic biomarkers. *Nature Biomedical Engineering*, **2021**, 5, 737-748	19	119
81	Wearable Biosupercapacitor: Harvesting and Storing Energy from Sweat. *Advanced Functional Materials*, **2021**, 31, 2102915	15.6	16
80	Demystifying phase transformations in metal halide perovskites. *Matter*, **2021**, 4, 2627-2629	12.7	1
79	Three-dimensional transistor arrays for intra- and inter-cellular recording.. *Nature Nanotechnology*, **2021**,	28.7	8
78	Stretchable Nanolayered Thermoelectric Energy Harvester on Complex and Dynamic Surfaces. *Nano Letters*, **2020**, 20, 4445-4453	11.5	55
77	Hierarchical 0D-2D bio-composite film based on enzyme-loaded polymeric nanoparticles decorating graphene nanosheets as a high-performance bio-sensing platform. *Biosensors and Bioelectronics*, **2020**, 156, 112134	11.8	18
76	Frequency- and Power-Dependent Photoresponse of a Perovskite Photodetector Down to the Single-Photon Level. *Nano Letters*, **2020**, 20, 2144-2151	11.5	15
75	Strain engineering and epitaxial stabilization of halide perovskites. *Nature*, **2020**, 577, 209-215	50.4	213

74	A fabrication process for flexible single-crystal perovskite devices. *Nature*, **2020**, 583, 790-795	50.4	143
73	Deciphering facial movements. *Nature Biomedical Engineering*, **2020**, 4, 935-936	19	
72	Role of the Metal-Semiconductor Interface in Halide Perovskite Devices for Radiation Photon Counting. *ACS Applied Materials & Interfaces*, **2020**, 12, 45533-45540	9.5	11
71	Silver Nanoparticle-Enzyme Composite Films for Hydrogen Peroxide Detection. *ACS Applied Nano Materials*, **2019**, 2, 5910-5921	5.6	19
70	Wearable thermoelectrics for personalized thermoregulation. *Science Advances*, **2019**, 5, eaaw0536	14.3	154
69	Biomembrane-Modified Field Effect Transistors for Sensitive and Quantitative Detection of Biological Toxins and Pathogens. *ACS Nano*, **2019**, 13, 3714-3722	16.7	147
68	Array atomic force microscopy for real-time multiparametric analysis. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 5872-5877	11.5	8
67	Facile one-step fabrication of glucose oxidase loaded polymeric nanoparticles decorating MWCNTs for constructing glucose biosensing platform: Structure matters. *Biosensors and Bioelectronics*, **2019**, 135, 153-159	11.8	25
66	A Biomimetic Soft Lens Controlled by Electrooculographic Signal. *Advanced Functional Materials*, **2019**, 29, 1903762	15.6	30
65	Stretchable and Flexible Buckypaper-Based Lactate Biofuel Cell for Wearable Electronics. *Advanced Functional Materials*, **2019**, 29, 1905785	15.6	81
64	Controlled Homoepitaxial Growth of Hybrid Perovskites. *Advanced Materials*, **2018**, 30, e1705992	24	51
63	Stretchable ultrasonic transducer arrays for three-dimensional imaging on complex surfaces. *Science Advances*, **2018**, 4, eaar3979	14.3	119
62	Three-dimensional integrated stretchable electronics. *Nature Electronics*, **2018**, 1, 473-480	28.4	201
61	Integration Techniques for Micro/Nanostructure-based Large-Area Electronics **2018**,		12
60	Materials and Structures toward Soft Electronics. *Advanced Materials*, **2018**, 30, e1801368	24	298
59	Monitoring of the central blood pressure waveform via a conformal ultrasonic device. *Nature Biomedical Engineering*, **2018**, 2, 687-695	19	299
58	Highly Stable Battery Pack via Insulated, Reinforced, Buckling-Enabled Interconnect Array. *Small*, **2018**, 14, e1800938	11	25
57	Merging of Thin- and Thick-Film Fabrication Technologies: Toward Soft Stretchable "Island–Bridge" Devices. *Advanced Materials Technologies*, **2017**, 2, 1600284	6.8	57

56	Electroplating lithium transition metal oxides. *Science Advances*, **2017**, 3, e1602427	14.3	45
55	Soft, stretchable, high power density electronic skin-based biofuel cells for scavenging energy from human sweat. *Energy and Environmental Science*, **2017**, 10, 1581-1589	35.4	225
54	Self-assembled three dimensional network designs for soft electronics. *Nature Communications*, **2017**, 8, 15894	17.4	238
53	Deterministic Integration of Biological and Soft Materials onto 3D Microscale Cellular Frameworks. *Advanced Biology*, **2017**, 1, 1700068	3.5	12
52	Battery-free, stretchable optoelectronic systems for wireless optical characterization of the skin. *Science Advances*, **2016**, 2, e1600418	14.3	266
51	Soft, thin skin-mounted power management systems and their use in wireless thermography. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 6131-6	11.5	108
50	Ferromagnetic, folded electrode composite as a soft interface to the skin for long-term electrophysiological recording. *Advanced Functional Materials*, **2016**, 26, 7281-7290	15.6	40
49	Stretchable Electronics: Epidermal Electronics with Advanced Capabilities in Near-Field Communication (Small 8/2015). *Small*, **2015**, 11, 905-905	11	8
48	Soft network composite materials with deterministic and bio-inspired designs. *Nature Communications*, **2015**, 6, 6566	17.4	289
47	Holographic patterning of high-performance on-chip 3D lithium-ion microbatteries. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 6573-8	11.5	144
46	Lateral buckling and mechanical stretchability of fractal interconnects partially bonded onto an elastomeric substrate. *Applied Physics Letters*, **2015**, 106, 091902	3.4	37
45	Epidermal electronics with advanced capabilities in near-field communication. *Small*, **2015**, 11, 906-12	11	191
44	Epidermal Electronics: Miniaturized Flexible Electronic Systems with Wireless Power and Near-Field Communication Capabilities (Adv. Funct. Mater. 30/2015). *Advanced Functional Materials*, **2015**, 25, 4919-4919	15.6	2
43	Miniaturized Flexible Electronic Systems with Wireless Power and Near-Field Communication Capabilities. *Advanced Functional Materials*, **2015**, 25, 4761-4767	15.6	114
42	Materials science. Assembly of micro/nanomaterials into complex, three-dimensional architectures by compressive buckling. *Science*, **2015**, 347, 154-9	33.3	587
41	Soft microfluidic assemblies of sensors, circuits, and radios for the skin. *Science*, **2014**, 344, 70-4	33.3	802
40	Rugged and breathable forms of stretchable electronics with adherent composite substrates for transcutaneous monitoring. *Nature Communications*, **2014**, 5, 4779	17.4	245
39	Experimental and Theoretical Studies of Serpentine Microstructures Bonded To Prestrained Elastomers for Stretchable Electronics. *Advanced Functional Materials*, **2014**, 24, 2028-2037	15.6	220

38	Chapter 5:Nanowires for Piezoelectric Nanogenerators. *RSC Smart Materials*, **2014**, 200-276	0.6	
37	A hierarchical computational model for stretchable interconnects with fractal-inspired designs. *Journal of the Mechanics and Physics of Solids*, **2014**, 72, 115-130	5	89
36	Buckling in serpentine microstructures and applications in elastomer-supported ultra-stretchable electronics with high areal coverage. *Soft Matter*, **2013**, 9, 8062-8070	3.6	192
35	Imprintable, bendable, and shape-conformable polymer electrolytes for versatile-shaped lithium-ion batteries. *Advanced Materials*, **2013**, 25, 1395-400	24	165
34	Mechanics of ultra-stretchable self-similar serpentine interconnects. *Acta Materialia*, **2013**, 61, 7816-7827	3.4	147
33	Stretchable batteries with self-similar serpentine interconnects and integrated wireless recharging systems. *Nature Communications*, **2013**, 4, 1543	17.4	978
32	Polymer Electrolytes: Imprintable, Bendable, and Shape-Conformable Polymer Electrolytes for Versatile-Shaped Lithium-Ion Batteries (Adv. Mater. 10/2013). *Advanced Materials*, **2013**, 25, 1512-1512	24	1
31	Hybridizing ZnO Nanowires with Micropyramid Silicon Wafers as Superhydrophobic High-Efficiency Solar Cells. *Advanced Energy Materials*, **2012**, 2, 47-51	21.8	81
30	One-dimensional ZnO nanostructures: Solution growth and functional properties. *Nano Research*, **2011**, 4, 1013-1098	10	1049
29	Enhancing light emission of ZnO microwire-based diodes by piezo-phototronic effect. *Nano Letters*, **2011**, 11, 4012-7	11.5	283
28	Oxide nanowire arrays for light-emitting diodes and piezoelectric energy harvesters. *Pure and Applied Chemistry*, **2011**, 83, 2171-2198	2.1	5
27	Self-powered nanowire devices. *Nature Nanotechnology*, **2010**, 5, 366-73	28.7	1279
26	Piezoelectric $BaTiO_3$ thin film nanogenerator on plastic substrates. *Nano Letters*, **2010**, 10, 4939-43	11.5	597
25	Planar waveguide-nanowire integrated three-dimensional dye-sensitized solar cells. *Nano Letters*, **2010**, 10, 2092-6	11.5	92
24	Enhancing sensitivity of a single ZnO micro-/nanowire photodetector by piezo-phototronic effect. *ACS Nano*, **2010**, 4, 6285-91	16.7	381
23	Zinc Oxide Nanowire Arrays on Flexible Substrates **2010**, 197-226		3
22	Growth and replication of ordered ZnO nanowire arrays on general flexible substrates. *Journal of Materials Chemistry*, **2010**, 20, 10606		60
21	Piezoelectric-nanowire-enabled power source for driving wireless microelectronics. *Nature Communications*, **2010**, 1, 93	17.4	377

20	A General Approach for Fabricating Arc-Shaped Composite Nanowire Arrays by Pulsed Laser Deposition. *Advanced Functional Materials*, **2010**, 20, 703-707	15.6	24
19	Growth and Transfer of Monolithic Horizontal ZnO Nanowire Superstructures onto Flexible Substrates. *Advanced Functional Materials*, **2010**, 20, 1493-1497	15.6	35
18	Ordered nanowire array blue/near-UV light emitting diodes. *Advanced Materials*, **2010**, 22, 4749-53	24	192
17	Lateral nanowire/nanobelt based nanogenerators, piezotronics and piezo-phototronics. *Materials Science and Engineering Reports*, **2010**, 70, 320-329	30.9	185
16	Structural colors from Morpho peleides butterfly wing scales. *Journal of Applied Physics*, **2009**, 106, 074702	2.5	37
15	Patterned growth of horizontal ZnO nanowire arrays. *Journal of the American Chemical Society*, **2009**, 131, 6670-1	16.4	91
14	Optimizing and Improving the Growth Quality of ZnO Nanowire Arrays Guided by Statistical Design of Experiments. *ACS Nano*, **2009**, 3, 1803-12	16.7	128
13	Growth of ZnO nanotube arrays and nanotube based piezoelectric nanogenerators. *Journal of Materials Chemistry*, **2009**, 19, 9260		161
12	Piezoelectric potential gated field-effect transistor based on a free-standing ZnO wire. *Nano Letters*, **2009**, 9, 3435-9	11.5	121
11	Density-controlled growth of aligned ZnO nanowire arrays by seedless chemical approach on smooth surfaces. *Journal of Materials Research*, **2008**, 23, 2072-2077	2.5	216
10	Integrated multilayer nanogenerator fabricated using paired nanotip-to-nanowire brushes. *Nano Letters*, **2008**, 8, 4027-32	11.5	124
9	Patterned growth of vertically aligned ZnO nanowire arrays on inorganic substrates at low temperature without catalyst. *Journal of the American Chemical Society*, **2008**, 130, 14958-9	16.4	243
8	Growth of Vertically Aligned ZnO Nanobelt Arrays on GaN Substrate. *Journal of Physical Chemistry C* , **2008**, 112, 18935-18937	3.8	31
7	Modifying the anti-wetting property of butterfly wings and water strider legs by atomic layer deposition coating: surface materials versus geometry. *Nanotechnology*, **2008**, 19, 355708	3.4	48
6	Four thiocyanato-bridged cadmium(II) polymeric complexes based on open chain diazine ligands. *Journal of Molecular Structure*, **2008**, 875, 80-85	3.4	7
5	Syntheses and crystal structures of three Mn(II) complexes with 2-hydroxynicotinate. *Inorganica Chimica Acta*, **2007**, 360, 1466-1473	2.7	15
4	Structures and/or magnetic properties of three 1D ladder-type manganic and cadmium compounds with open-chain diazine Schiff-base ligands. *Journal of Molecular Structure*, **2007**, 841, 67-72	3.4	15
3	Evaluate simulation design alternatives for large scale manufacturing systems **2005**,		3

2	Time management in distributed factory simulation, a case study using HLA		7
1	Soft wearable devices for deep-tissue sensing. *Nature Reviews Materials*,	73.3	10